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Bell Peppers!

At our local Safeway on SE Woodstock, there are for sale green, yellow, orange, and red bell peppers. Green bell peppers are price at $.89, yellow and orange at $2.79 and red at $1.89 each. Retail prices at other grocery stores show similar prices.

The question is; why are differently colored bell peppers sold at significantly different prices, and what does this imply about the market for green, yellow, orange, and red bell peppers.

At least one part of the answer to why some bell peppers are less expensive than others lies in how each is grown. According to an article by the World's Healthiest Foods website (http://www.whfoods.com/genpage.php?tname=foodtip&dbid=68), all bell peppers are the same variety of plant, the difference comes in how long the vegetables are allowed to mature. Green bell peppers are simply harvested before they turn yellow, orange, and eventually red.

Taking into account the water, labor, and time put into each type of peppers the cost of production for green peppers is lowest, yellow next, then orange, with red being produced at the highest cost. Also, the longer the peppers are left on the plant, the greater chance that they will be destroyed and not reach the desired level of ripeness.

In competitive markets, the price settles at the long run average cost. Therefore, if the market for bell peppers was perfectly competitive, then the price of each different type of pepper would increase incrementally, representing the higher cost of production for each.

Also according to the World's Healthiest Foods website, green peppers have a slightly bitter taste. The more the peppers are allowed to mature, (yellow through red) they continue to get more and more sweet.

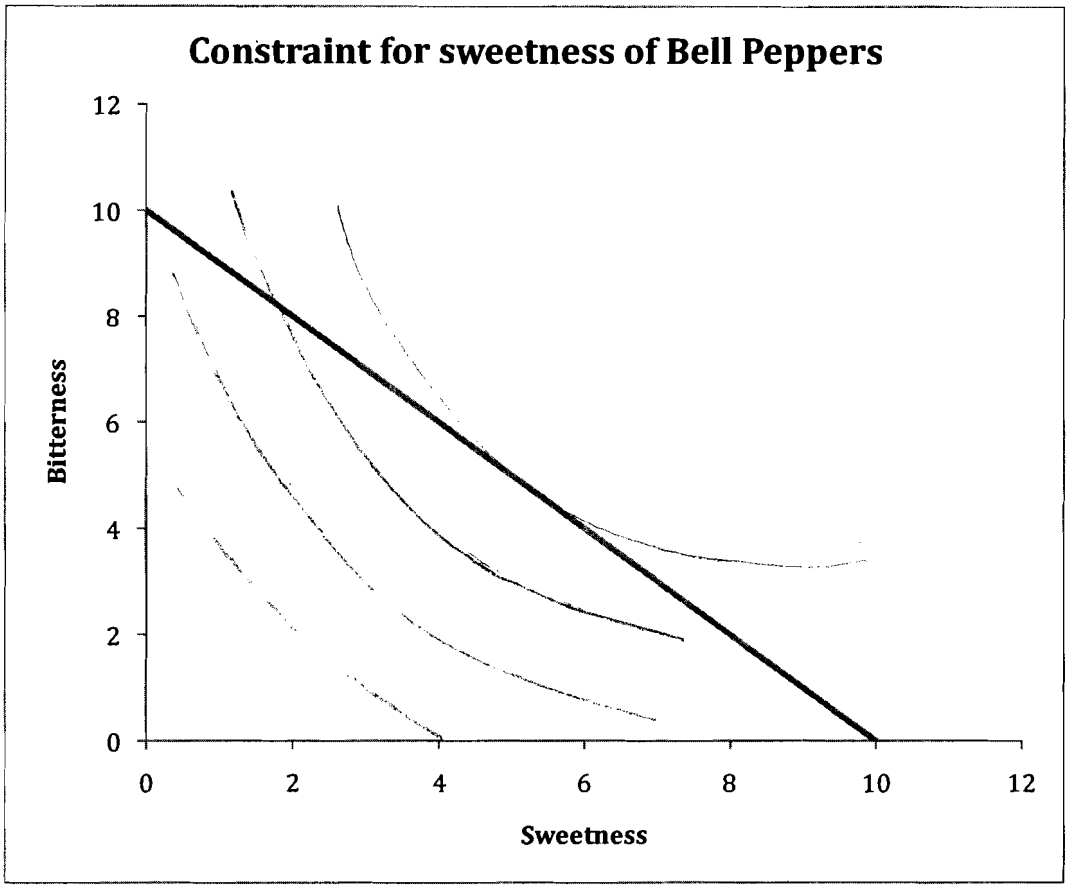
The implications this lends to the market of bell peppers is perhaps more interesting than the price differentiation itself. If producers are able to sell the peppers at different prices that do not reflect the long run average cost curves then it is clear that the different colors of peppers are not perfect substitutes. Because consumers are willing to pay around a dollar more for red and even more than that for yellow or orange peppers, we know that they must value them more. As noted on the World's Healthiest Foods website, yellow, orange, and red bell peppers are sweeter than green ones which could account for at least some of the product differentiation. Consumers who like sweet peppers better than bitter peppers would be willing to pay more for that trait.

However, this does not explain why yellow and orange peppers are more expensive then red ones. If it is the sweetness in the reds that consumers value more than the bitterness in the greens, then it would be logical that they would be willing to pay more for the reds than the oranges or yellows, having been left on the plant longer to mature and therefore being sweeter. However what we see instead is that consumers are willing to pay much more for the yellow and orange than even the red.

A possible explanation is given by the World's Healthiest Foods website that grocery stores are more likely to offer red and green peppers than yellow and orange ones. If correct, this could imply that, viewing the yellow and orange peppers as a more scarce or novel product, the consumers give them a higher value. This is obviously illogical, because they are in fact the same product that has been allowed to ripen for a different period of time. Even if it can be understood that green and red peppers have a distinctly different taste, making them not substitutable, it is hard to understand why yellow and orange peppers, which are sweeter than green peppers, but not as sweet as red ones should be more expensive, especially considering that their cost of production is lower than that of red peppers. It seems that if the consumers were fully informed as to the nature and differences of yellow orange, and red peppers and did not view them as substitutes, they would value the peppers incrementally, in this order, green, yellow, orange, then red, with a price increase with each degree of sweetness.

The only way to explain this phenomenon in terms of economic theory is to use indifference curves. If bitter and sweet peppers are indeed substitutes, then the trade off between them could be represented with the graph above. As the indifference curves indicate, it is possible that consumers could actually value peppers that are not too sweet and not too bitter more than those at either extreme. This would mean that they would get the greatest utility from yellow or orange peppers. If consumers valued these peppers more, it is logical that they would be sold at a higher price. However, this model is based on the personal preferences of each consumer. This line of reasoning would on hold true if every consumer had similar indifference curves, which is highly unlikely.

The figure below demonstrates possible indifference curves that could result in the pricing seen in bell peppers.



I therefore find that green peppers are priced lower because they have a less desirable, bitter taste. The price of yellow and orange peppers brings up an interesting dilemma in economics; taste. Though, as seen in the indifference curves, it is something we can incorporate into our analysis, it is something we will never be able to predict or define completely. It is a definite possibility that this entire case comes down to the taste of the consumers. However, I think it a much more likely conclusion for why yellow and orange bell peppers are more expensive than both green and red ones is that consumers are making choices without being fully informed.